IP Indoor High Speed Dome

CAM-6510

Ver. 090318

Hardware User's Manual

www.acti.com

0 PRECAUTIONS

1. **Read these instructions**
   All the safety and operating instructions should be read before the product is operated.
2. **Heed all warnings**
   All warnings on the product and in the instruction manual should be adhered to.



The symbol indicates the following items, please carefully read the description next to each symbol.

a. Failure to follow the safety instruction given may directly endanger people, cause damage to the system or to other equipment.
b. The requirements to make this device work, including hardware, computer settings, network settings, and operation procedures.
c. The tips to make using this device easier, more convenient and more efficient.

3. **Servicing**
   Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Copyright

Trademarks

All names used in this manual for hardware and software are probably registered trademarks of respective companies.

Liability

Every care has been taken during writing this manual. Please inform your local office if you find any inaccuracies or omissions. We cannot be held responsible for any

typographical or technical errors and reserve the right to make changes to the product and manuals without prior notice.

FCC/CE Regulation

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Table of Contents

1 INTRODUCTION

1.1 Package Contents

CAM-6500 series



Warranty Card



Product CD



Power & A/V Cable



LAN/WAN Cable



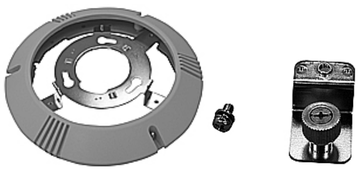
Power Adaptor



5.4" Transparent Cover



Decoration Ring / Fixing Plate



1.2 Features and Benefits

The IP High Speed Dome is designed to deliver superb performance and durability with an intelligent and stylish housing. It also provides a realiable real time images with outstanding image quality (D1, 720x480) at reasonable bandwidth through a standard TCP/IP network. That's because it is Ethernet (LAN and WAN) ready and has a powerful ARM9 SoC and the MPEG-4 compression ASIC inside. In addition, with these powerful hardware platform, excellent SDK support and powerful respective apparatuses (eg. the transcoder or control keyboards), this IP high speed dome is your best choice building up either conventional IP surveillance system or intelligent IP surveillance system.

The integrated IP high speed dome provides three models:

- **18x MODEL**: 18x optical zoom multiply 12x digital magnifier/D&N

Precise and Accurate Tracking

Scheduling function, a special feature, enables users to program a preset point or function (Sequence/Auto/Cruise) automatically actions in certain period of time. The IP high speed dome provides vaiable pan/tilt speed ranging from a fast patrol of 400° per second to a slow ramble of 5° per second with 0.225° pan accuracy for fast and accurate tracking ability. The 360° endless rotation and -10° ~190° tilt travel makes tracking the object passing directly beneath the dome. Maximum 256 preset points can be programmed for precise location of target areas, and you can also define 8 sequence, 4 auto-pan and 1 cruise rotes for the camera to operate automatically.

Day/Night Features

IR cut filter removable ensures 24 hours operation

Low-Light Application

Digital Slow Shutter and Electronic Shutter functions are provided for clear and high quality image. The minimum illumination is 0.01 Lux.

Privacy Mask for Privacy Protection

There is up to 24 privacy zones of camera view programmable. This is specially designed to avoid any intrusive monitoring at specific region.

Real-time MPEG-4 Compression

With hardware MPEG-4 compression chip inside, the composite video inputs can be efficiently compressed into MPEG-4 bit stream without any delay. The ASIC base compression engine can support not only CIF, but also FULL D1 image resolution.

QoS Enabled Video Streaming

For real-time video streaming requirements, the IP high speed dome implemented the 802.1Q features inside the SoC as the streaming engine to make sure the video streaming package is forwarded faster than normal TCP/UDP packet.

Automatic Frame Rate Control

The IP high speed dome supports automatic/manual streaming frame rate control, especially for multiple clients concurrent access the same video stream in different network bandwidth.

Digital Time Code Embedded

The "Digital Time Code Embedded" function is to embed the recording time in the MPEG bit stream. Therefore, each image frame has its respective time when it was recorded. It is very useful when users want to find the video at an exact time or between a certain time intervals.

Build-in LAN and WAN (Low Latency PPPoE Supported) Ports

The IP high speed dome provides two RJ-45 connectors. One is WAN and the other is LAN. The WAN port connects to the internet and LAN port connects to the local network. Since the internet's bandwidth is very critical, the WAN port is equipped with a low latency PPPoE (Point-to-Point over Ethernet) which has excellent transmission speed and enables the IP high speed dome to connect to an ADSL or a cable modem.

DDNS Supported

The IP high speed dome supports DDNS (Dynamic Domain Name Server), users can set the IP high speed dome at a virtual domain name (such as cam1.Taipei.xxx) at dynamic IP. Everyone can use the virtual domain name to view the video anywhere that has the access to the internet.

Build-in Hardware Motion Detection

No more external motion sensors are required. Each IP high speed dome can be set up to 3 detection areas. By tuning the object size and sensitivity, it is very reliable to fit into your environment. Besides, hardware motion detection delivers better sensitivity and respond faster than software motion detection.

Bundle Powerful Surveillance Software

To extend the capabilities of the IP high speed dome, a powerful surveillance program is included in the package and is totally free to use. Users can easily utilize the existing PC to be a digital video recorder. Schedule recording and manual recording keep every important image recorded in the local hard disk. Reliable and accurate motion detection with instant warning makes you responsive in every condition. Quick and simple search and playback function lets you easily find the images you want.

Software Development Kit Support

The IP high speed dome can be integrated or controlled by user's application program through the Streaming Library or ActiveX control. With its high level programming interface, software developer's time and efforts to is highly reduced.

Dynamic Dome Configuration

Flexible indoor/outdoor mountings. You may find a support package for getting familiar with IP high speed dome's mounting kits. Please visit our web site, and get the support package document TS-00004.

1.3 Safety Instructions

Don't use the power supply with other voltages

This device is likely to be damaged or damage other equipments / personnel, if you use a power supply with different voltage than the one included with this device. All warranty of this product will be voided in the situations above.

Don’t open the housing of the product

Cleaning

Disconnect this video product from the power supply before cleaning.

Attachments

Do not use attachments not recommended by the video product manufacturer as they may cause hazards.

Water and Moisture

Do not use this video product near water, for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool and the like.

Don’t use accessories not recommended by the manufacturer

- **Only install this device and the power supply in a dry place protected from weather**
- **Servicing**

Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring service

Disconnect this video product from the power supply immediately and refer servicing to qualified service personnel under the following conditions.

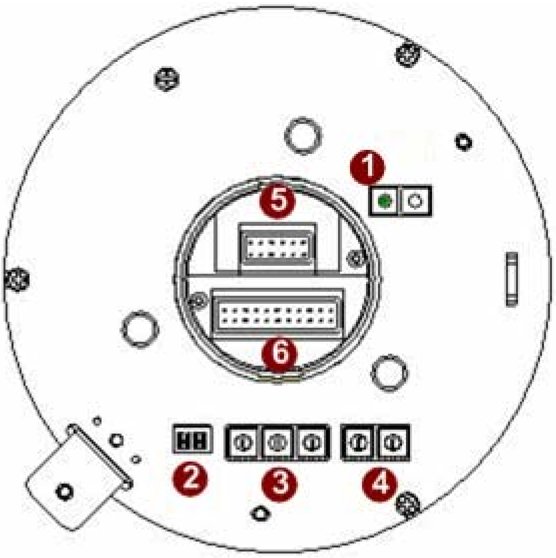
1. When the power-supply cord or plug is damaged.
2. If liquid has been spilled, or objects have fallen into the video product.
3. If the video product has been exposed to rain or water directly.
4. If the video product does not operate normally by following the operating Instructions in this manual. Adjust only those controls that are covered by the instruction manual as an improper adjustment . Other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.

Safety Check

Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

1.4 Physical Description

Indoor High Speed Dome Bottom



1. **<u>Reset Button</u>**

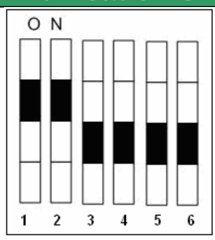
Step 1: Switch off IP device by disconnecting the power cable

Step 2: Press and continue to hold the Reset Button. Reconnect the power cable while continuing to hold the reset button.

Step 3: Keep holding the reset button depressed around 6 seconds, release the reset button. The unit will start up with factory default settings.

2. **<u>Communication Switch Setting</u>**

The table below shows the function of each pin within the Communication Switch.

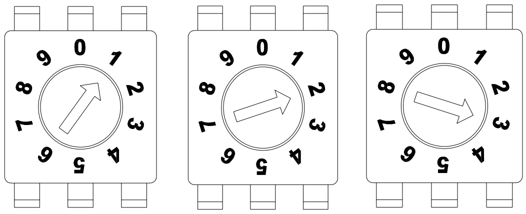
Communication Switch	Pin	Function
	Pin 1	RS-232 Setting (Reserved)
	Pin 2	
	Pin 3	Termination
	Pin 4	Line Lock
	Pin 5	System Initialization (for upgrade)
	Pin 6	Reserved

RS-232 is reserved for internal use only; The Pin 3 and Pin 4, they are used for termination and Link Lock adjustment respectively. The Pin 5 is mainly used for return to factory default of camera setting.

3. **<u>Dome ID Setting</u>**

Use the switch to change your speed dome ID by turning the

arrow to the desired number respectively. For instance, if the speed dome ID is 123, the ID switch should be set as below:



centesimal decimal single digit

NOTE: If controlling through an ACTi decoder via analog means such as a keyboard or DVR, no two speed domes should be given the same ID or communication conflict may occur. When controlled only through Ethernet and software (without the use of an ACTi hardware decoder), the dome ID setting may be neglected.

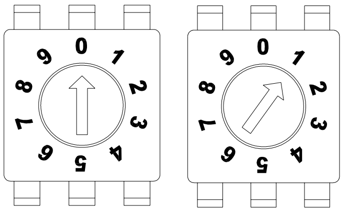
NOTE: The number “0” should locate upwards as shown in above diagram for correct switch definition.

4. Dome Control Protocol

Protocol is a specific set of rules, procdures used for data communications. Basing on the protocol of your management software that you are going to use. Use the switch to set your dome control protocol and the baud rate. Refer to table below and turn the arrow to choose a protocol for your speed dome.

Switch No.	Protocol	Baud Rate
01	Pelco D	2400
02	Pelco P	4800
07	DSCP	9600
11	Pelco D	4800
12	Pelco D	9600
13	Pelco P	2400
14	Pelco P	9600

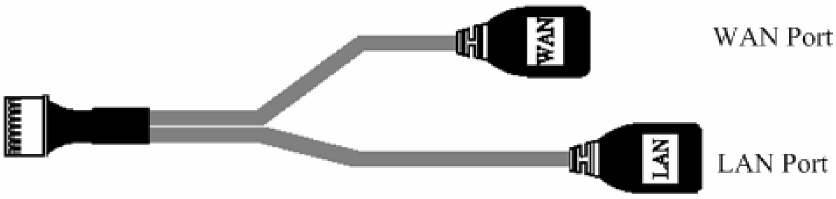
Select protocol: Pelco D, with switch no. 01 and baud rate 2400, for instance, the ID switch should be set as below:



decimal single digit

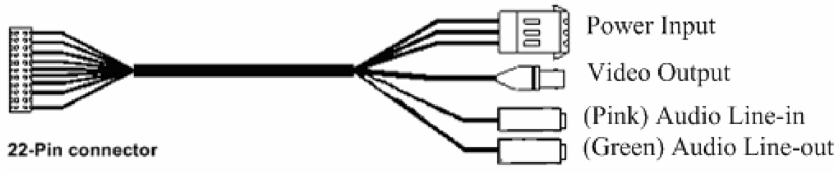
5. **<u>16 Pin Connector for LAN/WAN</u>**

The LAN/WAN cable (shown as the figure below) is shipped with IP high speed dome. Please find it in the accessory bag.



6. **<u>22 Pin Connector</u>**

A 50cm data cable (shown as the figure below) is shipped with IP high speed dome. Please find it in the accessory bag.



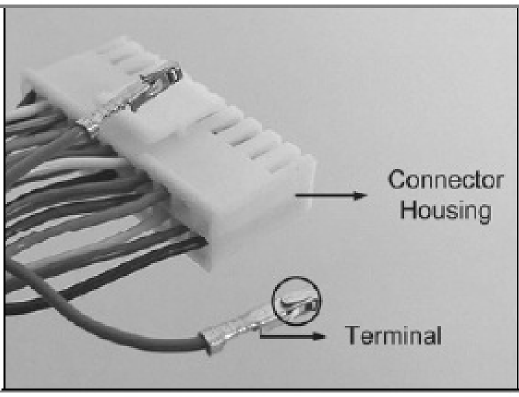
Power Input

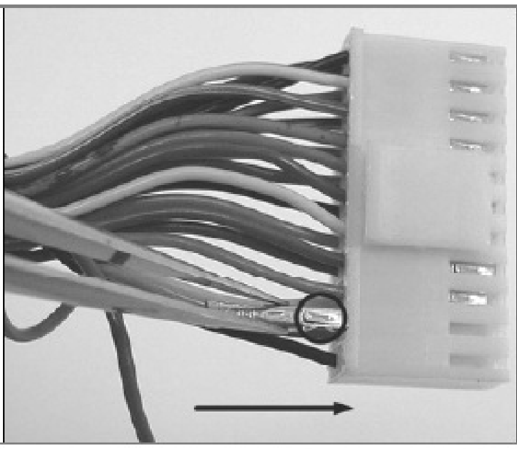
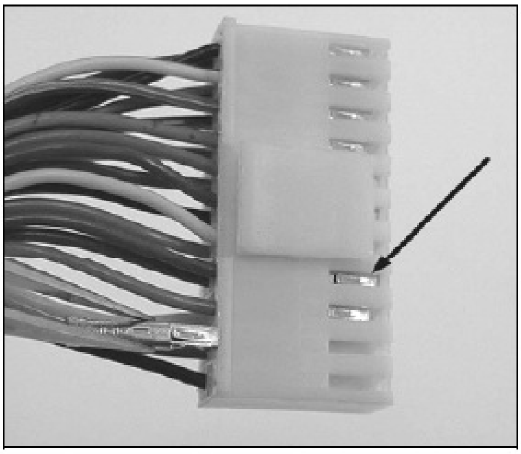


PIN	NAME	DESCRIPTION
1	AC24V	AC 24V of Power Input
2	E-GND	E-Ground Pin of Power Input
3	AC24V	AC 24V of Power Input

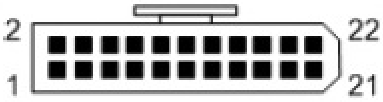
7. **<u>Cable Wiring</u>**

Users may meed to do cable wiring when connecting alarm input and output devices. The table follows will illustrate the way to wire cords into the connector housing(shown in the flgures below).

Insert the terminal into the pin holes on the connector housing, with the hook outward, as indicated in the figure.	
To unlock the terminal, press the hook, as indicated in the figure, with a proper tool and pull it out gently.	

The alarm pins are serviceable for connecting alarm input and output devices, such as alarm sensors, sirens or flashing light with the surveillance system. The table shown as follows lists the definition of alarm pins on the 22-pin connector.

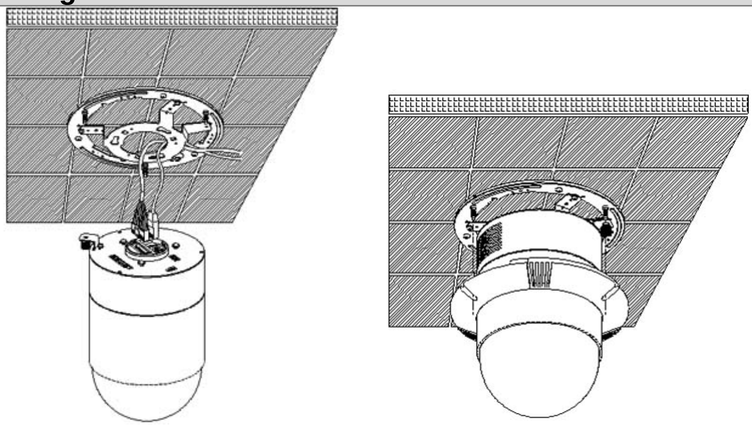


Pin	Definition
2	ALM NC
4	ALM NO
6	ALM COM
11	ISOG
12	ALM-1
13	ALM-3
14	ALM-2
15	ALM-4
16	ALM-5
17	ALM-6
18	ALM-7

1.5 Mounting the IP High Speed Dome

Generally, there are three kinds of ceiling mounting methods: surface mount, in-ceiling mount, and mounting with straight tube. The surface mounting kit is shipped with IP high speed dome. For more detailed information, please refer to Appendix A.

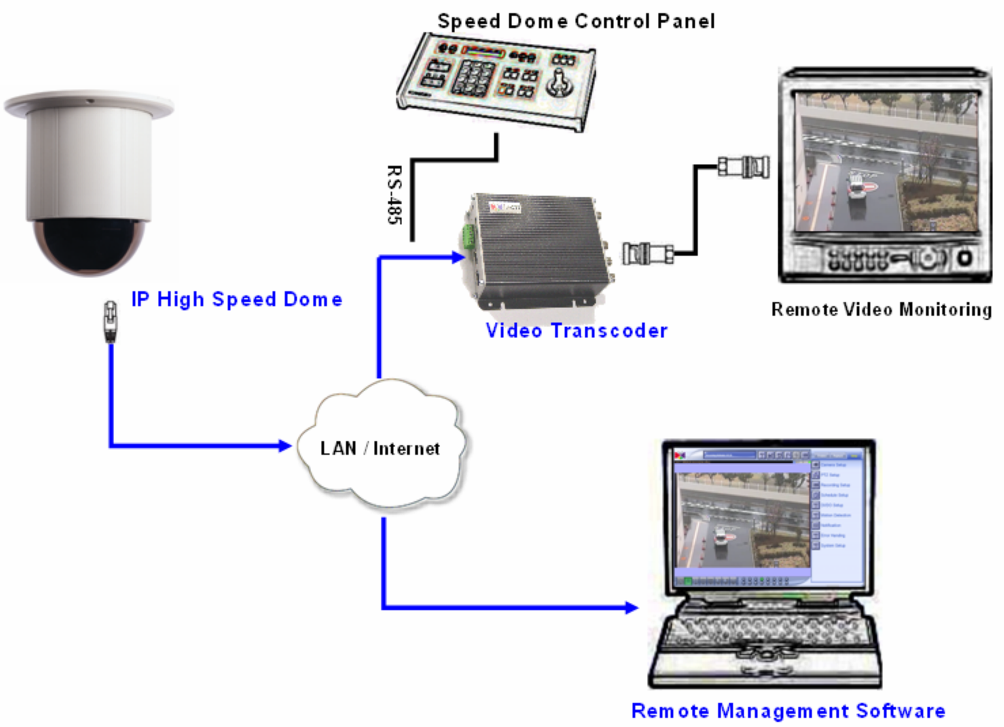
Surface ceiling mount



(cables exposed)

1.6 Basic Connections

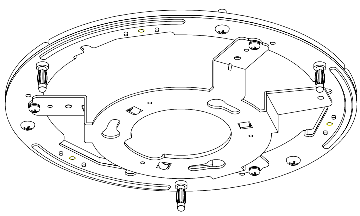
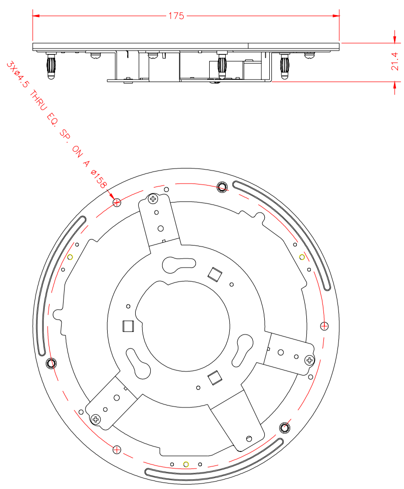
Follow the procedures below to connect the IP high speed dome to the respective apparatuses.

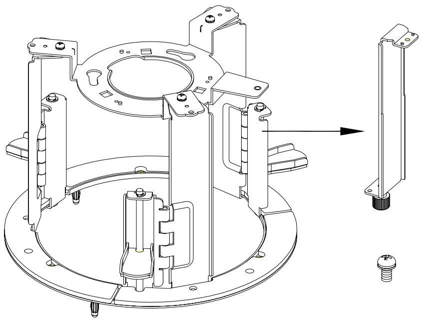


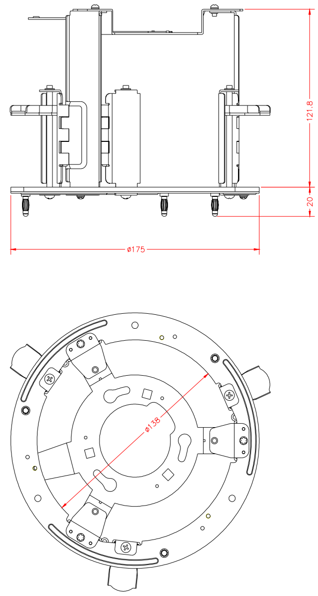
Appendix A: Speed Dome Installation

Basing on user's installation environments, the dome can be installed on ceiling, on wall or on pole. In the following section, various indoor speed dome installation accessories, installation methods and installation procedures will be described in detail.

A-1: Optional Accessories

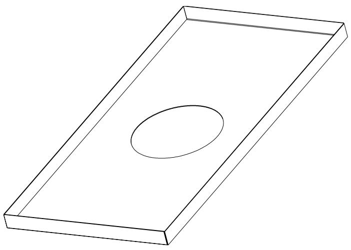
<table>
<tr><td colspan="2">Surface Ceiling Mount
For Surface Ceiling use. Height: 21.4mm ; Diameter of the three holes: 4.5mm ; Diameter of the bracket: 158mm</td></tr>
<tr><td></td><td>
</td></tr>
<tr><td colspan="2">In-Ceiling Mount
For in-ceiling Installation use. Height: 170 mm (6.7 inches); Diameter: 180 mm (7.1 inches); 0.5 kg (1.1 lbs)</td></tr>
</table>





Ceiling Panel

For ceiling mounting. Zn platted; 610×305 mm (24×12 inches); Diameter: 155 mm (6.1 inches)



Transparent Cover/Smoke Cover

Diameter: 137 mm (5.4 inches); 127 mm (5.0 inches)



5'' Transparent Cover   5.4'' Transparent Cover

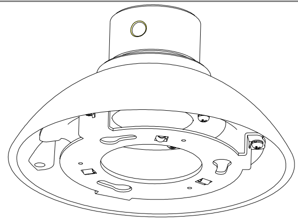


5'' Smoke Cover   5.4'' Smoke Cover

Indoor Mount Kit

White; Diameter: 140 mm (5.5 inches); Height: 74 mm (2.9 inches)

For mounting indoor dome camera onto a gooseneck/straight tube.



Mounting Accessories

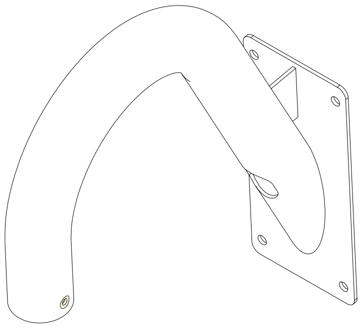
<table>
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Gooseneck Tube

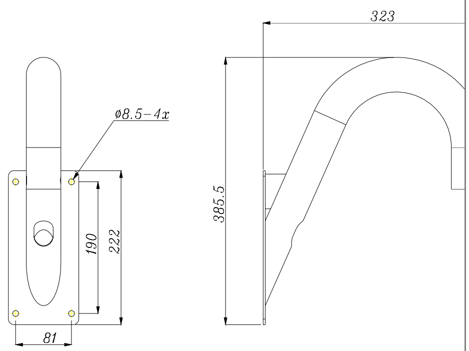
White/Iron; 298×385 mm (11.73×15.56 inches) ; 2.1 kg (4.6 lbs)

Supplied with rubber washer-8×1, pendant tube washer×1, spring washer-8×1 and waterproof rubber×1, M8*12 screw×1.

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<tr><td>



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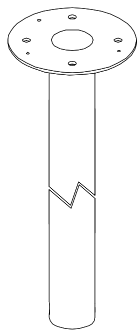
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Straight Tube

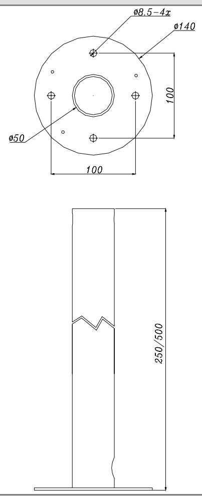
White/Iron; Height: 250/500 mm (9.8/19.7 inches); Diameter: 50 mm (2 inches)

1 kg (2.2 lbs) / 1.8 kg (4 lbs). Supplied with rubber washer-8×1, pendant tube washer×1, spring washer-8×1 and waterproof rubber×1, M8*12 screw×1.

</td></tr>
<tr><td>



</td><td>



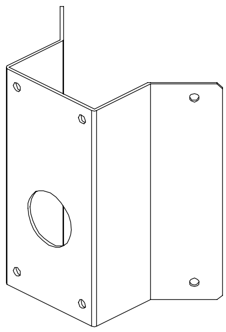
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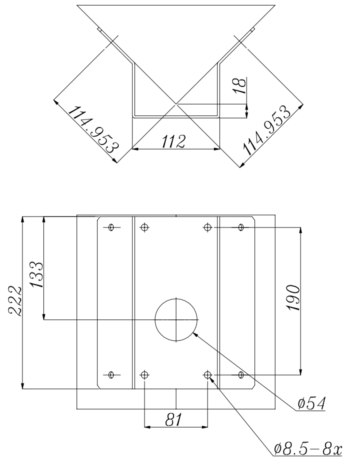
Corner Standard Mounting Plate

White; 222(L)×204(W)×117(D) mm (8.7×8×4.6 inches); 2 kg (4.4 lbs). Supplied with

</td></tr>
</table>

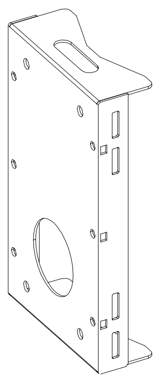
washer-8×4, spring washer×4, M8*20 screw×4, M8 nut×4.

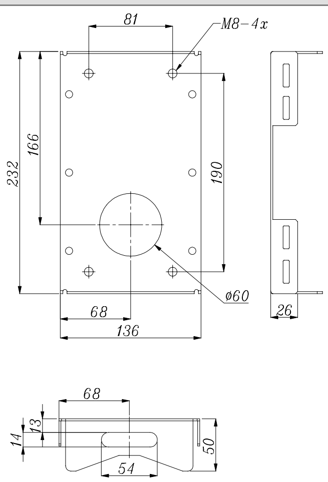




Pole Thin Direct Mounting

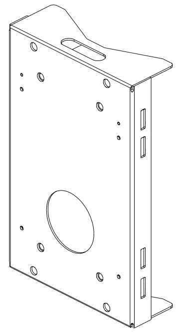
White/Ivory; 232(L)×136(W)×60(D) mm (9.1×5.4×2.4 inches); Diameter: 112~140 mm (4.4~5.5 inches); 0.7 kg (1.6 lbs). Supplied with stainless steel straps×4, M8*16 screw×4, washer×4.

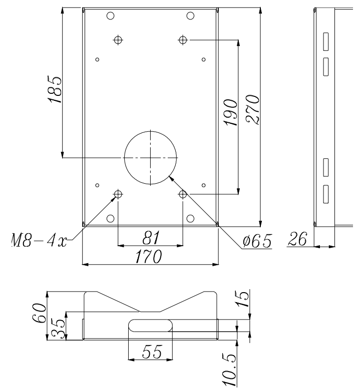




Pole Wide Direct Mounting

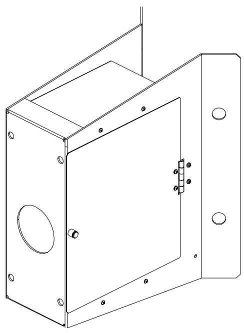
White/Ivory; 270(L)×170(W)×60(D) mm (10.6×6.7×2.4 inches); Diameter: 112~130 mm (4.4~5 inches); 1 kg (2.2 lbs). Supplied with stainless steel straps×4, M8*16 screw×4, washer×4, spring washer×4

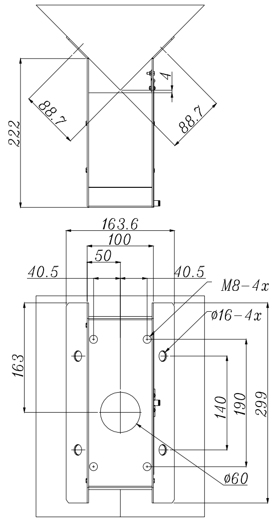




Corner Thin Box

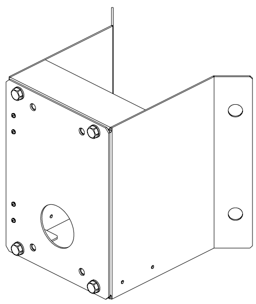
White/Ivory, 300(L)×164(W)×222(D) mm (11.8×6.5×8.7 inches); 3 kg (6.7 lbs); Supplied with washer×4, M8*16 screw×4 and spring washer×4.

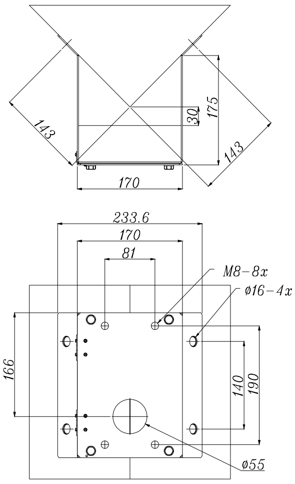




Corner Wide Box

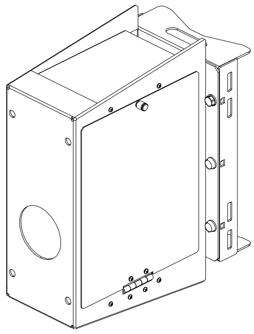
White/Ivory; 232(L)×234(W)×210(D) mm (9.1×9.2×8.3 inches); 2.7 kg (6 lbs); Supplied with washer×4, M8*16 screw×4 and spring washer×4.

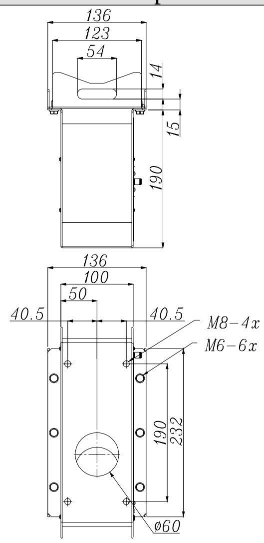




Pole Thin Box

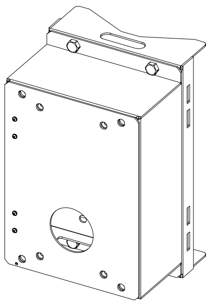
White/Ivory; 291(L)×136(W)×245(D) mm (11.5×5.3×9.5 inches); 3.1 kg (6.9 lbs); Supplied with M8*16 screw×4, washer×4, spring washer×4, stainless steel straps×4.

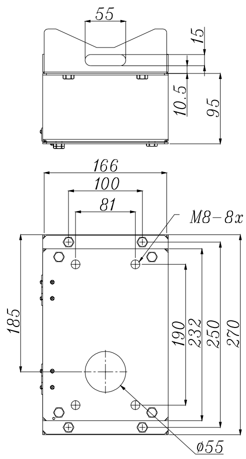




Pole Wide Box

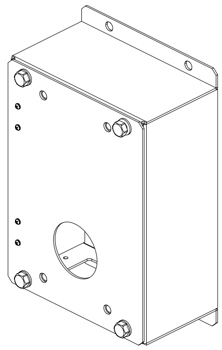
White/Ivory, 270(L)×166(W)×155(D) mm (10.6×6.5×6.1 inches); 3.2 kg (7.1 lbs); Supplied with M8*16 screw×4, washer×4, spring washer×4, stainless steel straps×4.

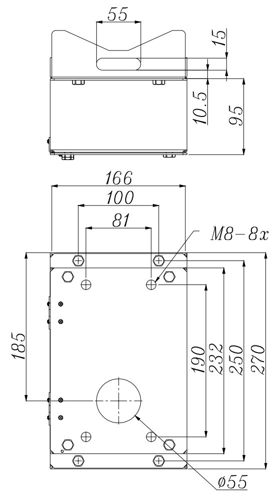




Wall Box Mounting

Ivory, 270(L)×166(W)×95(D) (10.6×6.5×3.7 inches); 2.2 kg (4.84 lbs); Supplied with M8*16 screw×4, washer×4, spring washer×4

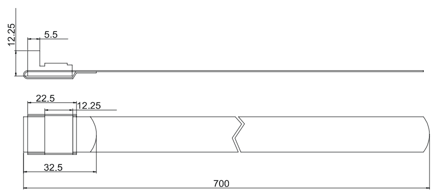




Stainless Steel Straps

For fixing Pole Direct Mounting/ Pole Box on the pole.

Width: 0.63”; 0.02 kg (0.04 lbs)



Stainless Strap Cutter

For tension, cut and crimp stainless steel straps. 1.4 kg (3.1 lbs)

Suitable for straps width: 1/2”, 5/8”, 3/4”



Other Application Accessories

Repeater/Converter

D77R1: RS-485/RS232 Converter

D77R2: RS232 between RS-485/RS-442

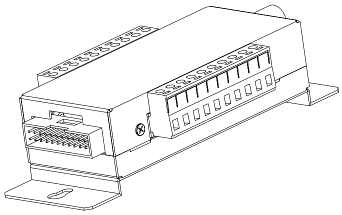
D77R3: Bi-phase to RS-485/RS-422



D77R1 D77R2 D77R3

Connector Box (Indoor Application)

Recommended for wiring indoor dome alarm cables. White Color. 92×42 mm (3.7×1.7 inches); 0.13 kg (0.3 lbs); Supplied with cable×1, bracket×1 and M3*6 screw×2.



Power Box

White; 186.5×147 mm (7.3×5.8 inches); 2.6 kg (5.8 lbs)

P1030 (Input: 110~115VAC/Output: 24VAC 72VA)

P2030 (Input: 220~230VAC/Output: 24VAC 72VA)



Power Adapter

77H07-A1015 (Input: 100~115VAC/Output: 24VAC 36VA)

77H07-A2015 (Input: 220~230VAC/Output: 24VAC 36VA)

77H07-A1030 (Input: 100~115VAC/ Output: 24VAC 72VA)

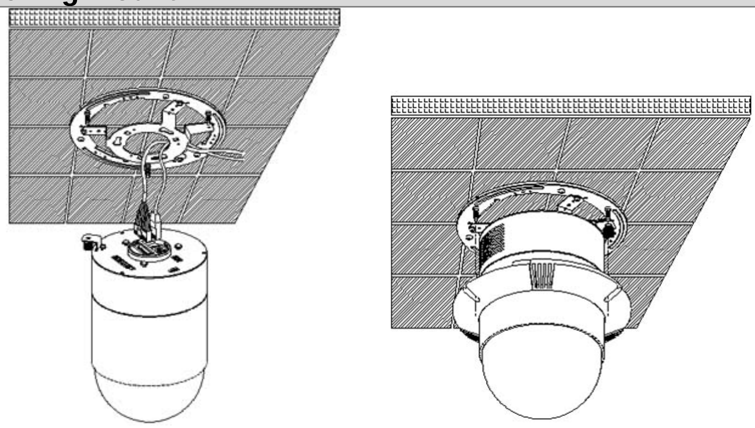
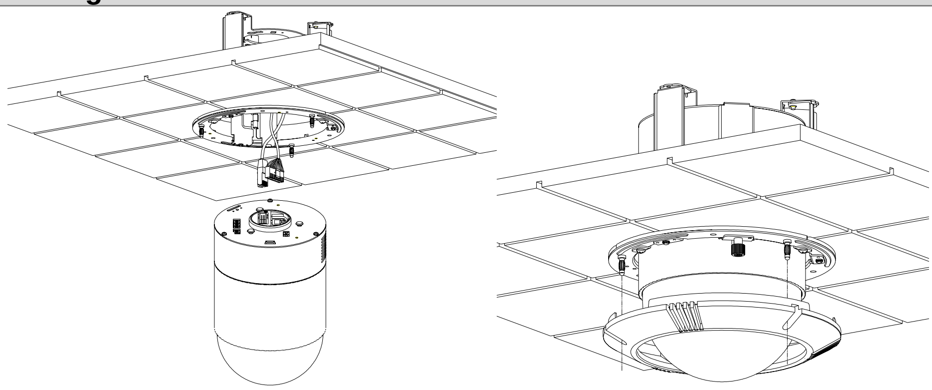
77H07-A2030 (Input: 220~230VAC/ Output: 24VAC 72VA)



A-2: Ceiling Mount

Generally, there are three kinds of speed dome camera ceiling mounting methods: surface mount, in-ceiling mount, and mounting with straight tube. Refer to the following sections for more detailed information.

The following figures show how cables connect to the speed dome camera in different ways.

Surface ceiling mount
 (cables exposed)
In-ceiling mount
 (cables recessed)

A-3: Surface Ceiling Mounting

Surface Ceiling Mounting is a standard installation for an indoor dome, and general mounting accessories are equipped in the standard indoor dome camera package. Here lists the items and tools needed to mount the dome camera onto the ceilings. The supplied items are all in the speed dome camera package.

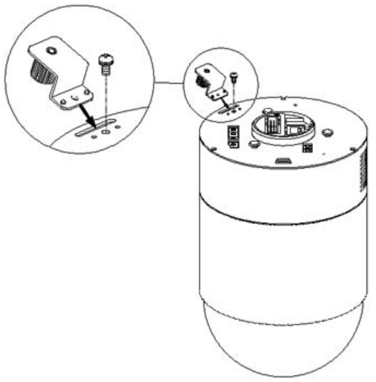
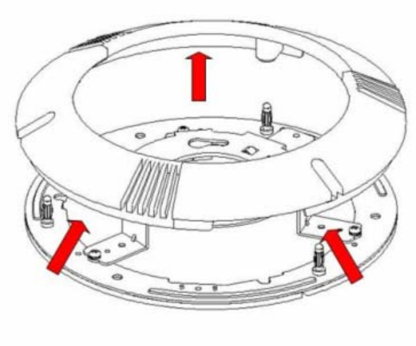
Items Needed:

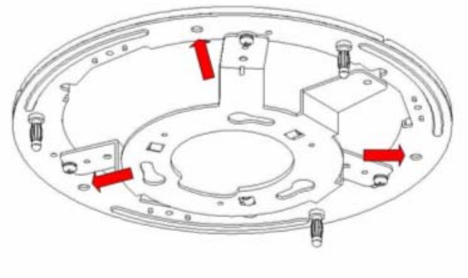
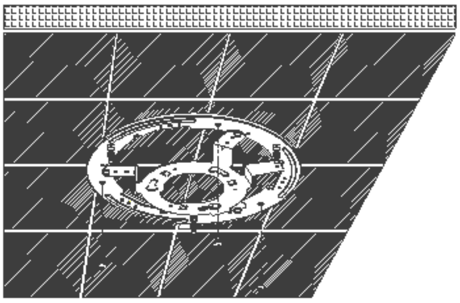
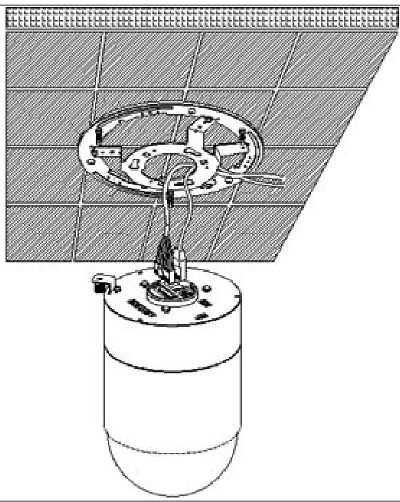
- ✓ IP High Speed Dome Camera
- ✓ Surface Ceiling Mount and Decoration Right
- ✓ Fixing Plate

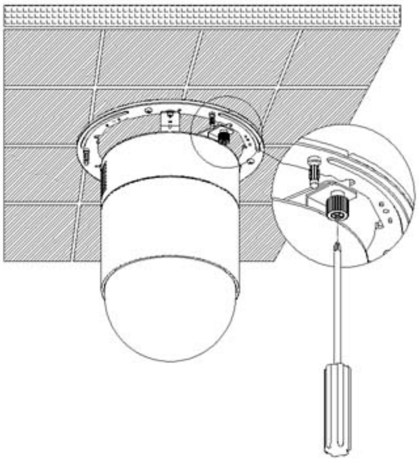
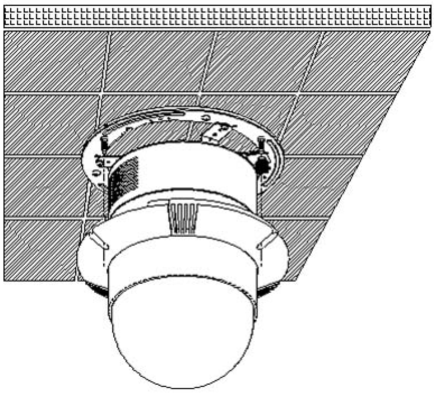
Tools Needed:

- ✓ Tool for drilling
- ✓ (+,-) Screw Driver

Follow the steps to install the IP high speed dome camera for surface ceilings.

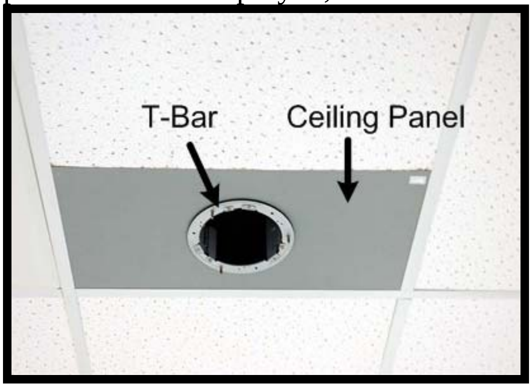
STEP 1 Screw the Fixing Plate to your Dome Body.	
STEP 2 Unpack the dome package and take out the Decoration Ring. Remove the Surface Ceiling Mount from the Decoration Ring.	

STEP 3 Attach the Mount to the ceiling. Mark the locations where all three ceiling holes should go. **STEP 4** Drill these holes on the surface ceiling.	
STEP 5 Fix the Mount to the holes on the surface ceiling with three screws.	
STEP 6 Thread the data cable through the center hole of the Mount and connect the cable to the dome body.	

STEP 7 Attach the dome body to the Mount and rotate the dome clockwise. Tighten the fixing screw to fix the dome body.	
STEP 8 Fix the decoration ring to the bracket and then place the optical cover.	

A-4: Ceiling Panel for In-ceiling Mounting

To mount the speed dome camera to a suspended ceiling with the T-Bar, the ceiling panel could be employed, as shown in the figure below.



Follow the steps below for installing the ceiling panel.

Step 1: Cut the ceiling half;

Step 2: Put the ceiling panel upward to the ceiling opening;

Step 3: Attach and fasten the T-Bar mount onto the panel (Refer to the next section **A-5 In-ceiling Mounting** for further details).

A-5: In-ceiling Mounting

Here lists the items and tools needed to mount the dome camera into the ceilings. The supplied items are all in the dome camera package.

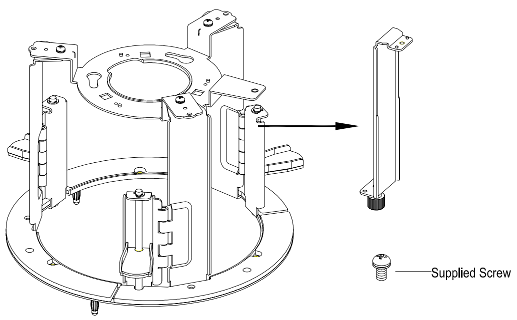
Items Needed:

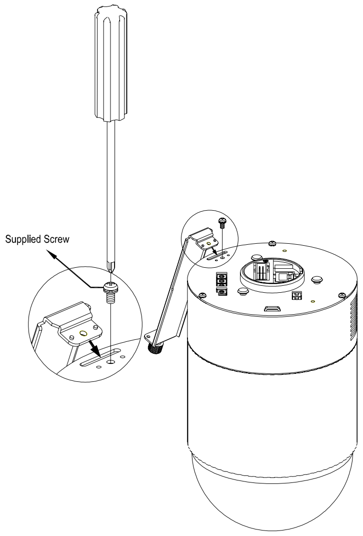
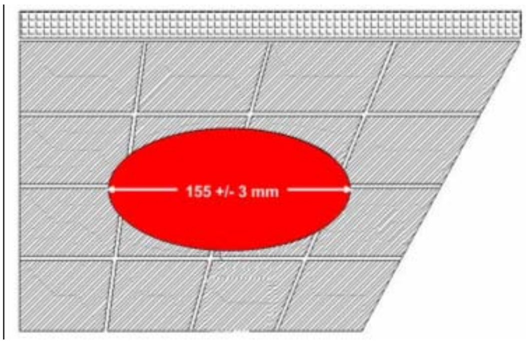
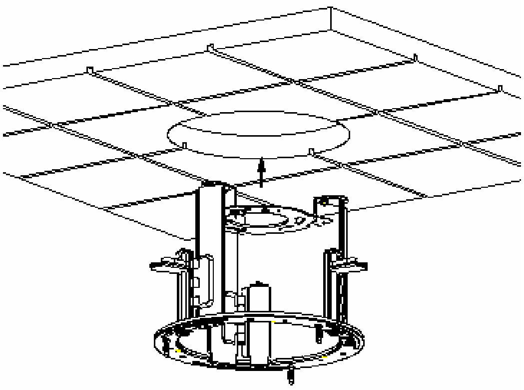
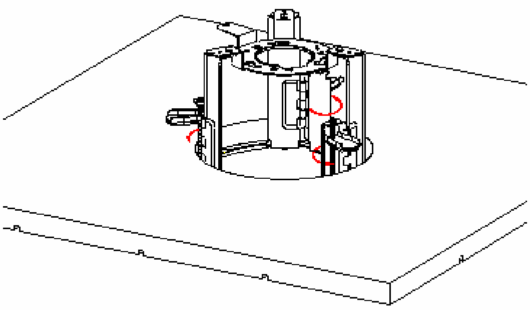
- ✓ IP High Speed Dome Camera
- ✓ T-Bar (Optional Accessory)
- ✓ Supplied Screw (Equipped with T-Bar)
- ✓ Red Sticker (Equipped with T-Bar)
- ✓ Decoration Ring (Equipped with Surface Ceiling Mount as standard equipment)

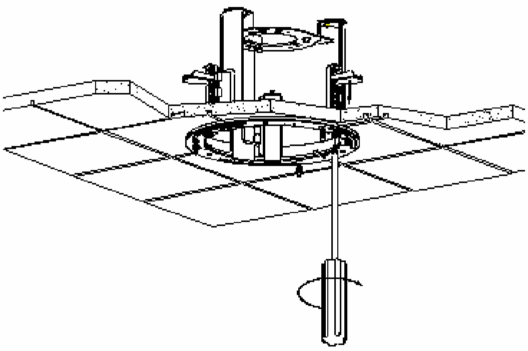
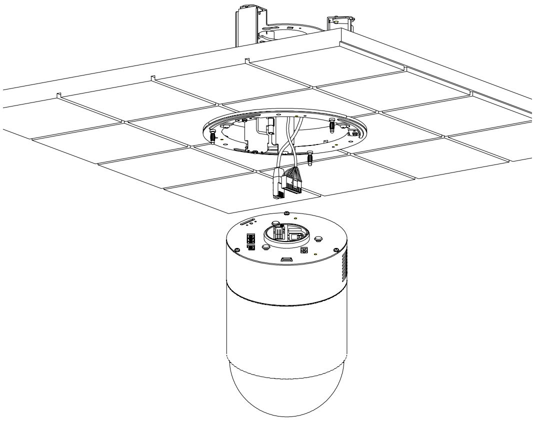
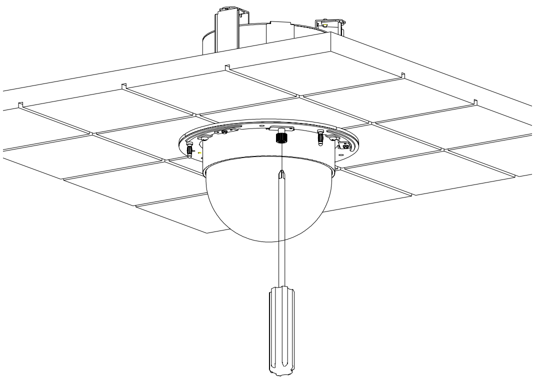
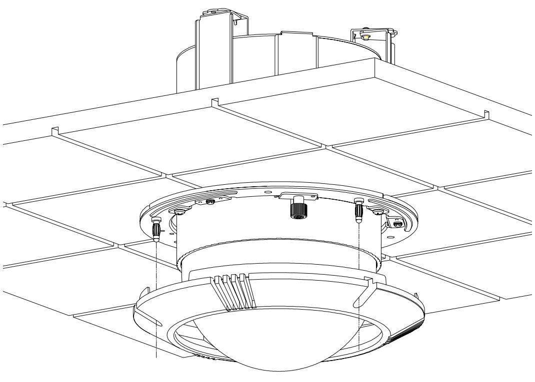
Tools Needed:

- ✓ Tool for cutting a circle on the ceiling
- ✓ (+,-) Screw Driver

Follow the steps to install the integrated high speed dome camera with T-Bar Ceiling mount accessory for in-ceiling mounting.

Step 1: Disassemble the wing (indicated in the diagram) from the T-Bar Ceiling Mount, and take out the supplied screw in the small bag.	

Step 2: Attach the separated wing to the dome, as shown in the diagram.	
STEP 3 Place the Red Sticker on the ceiling plate, and cut the circle part out of the ceiling.	
STEP 4 Put up the T-Bar into the ceiling hole.	
STEP 5 Rotate T-Bar wings of the hinge to fix the T-Bar at the edge of the ceiling hole.	

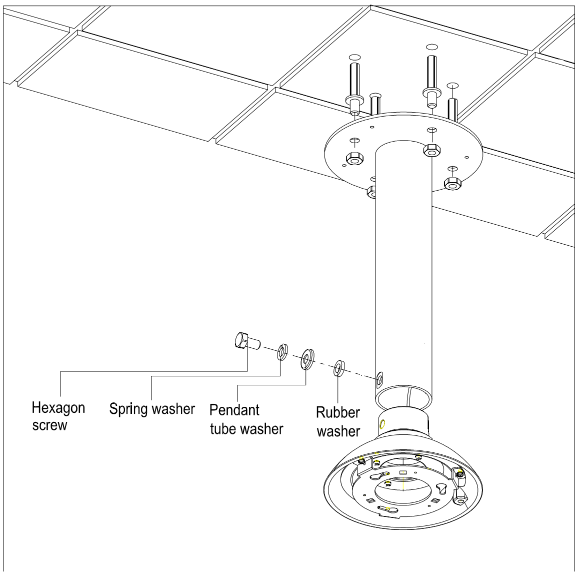
STEP 6 Tighten the screws, and the T-Bar wings will adhere to the ceiling.	
STEP 7 Put the 22-pin data cable through the center hole of the T-bar and connect it to the dome body.	
STEP 8 Mount the dome body to the Bracket and rotate it clockwise. Tighten the fixing screw to fix the dome body.	
STEP 9 Fix the decoration ring to the bracket and then place the optical cover.	

A-6: Ceiling Mount with Straight Tube

The straight tube is available in different length: 25cm and 50cm. Follow the steps to mount the speed with the straight tube.

(1) Ensure that the ceiling can support the weight of the speed dome camera and straight tube.
(2) Make a cable entry hole on the ceiling
(3) Fix the suspension bracket to the ceiling
(4) Thread the cables through the straight tube and the Indoor Mount kit and connect them to the speed dome camera
(5) Fix the Indoor Mount kit to the straight tube using the screws and washers
(6) Attach the dome camera to the Indoor Mounting kit and fix them with the screw

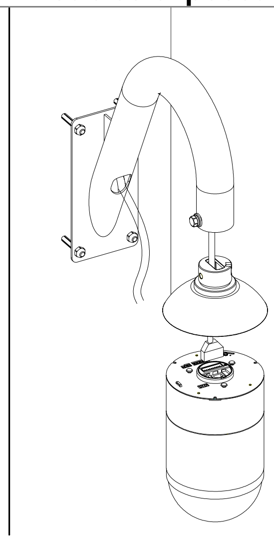
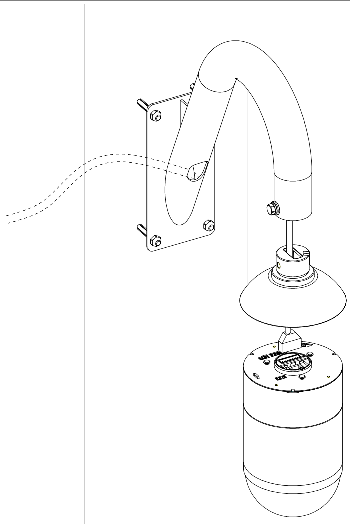
Ceiling Mounting: Straight Tube + Indoor Mount Kit



A-7: Wall Mount

A-7-1 Wall Mounting with Gooseneck Tble

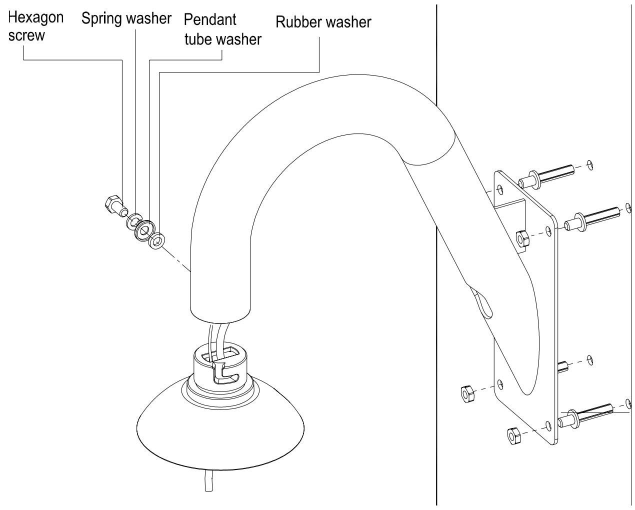
The following figures show how cables run through the tube in different ways.

Cables exposed	Cables recessed
	

Follow the steps to mount the speed dome with the gooseneck tube.

(1) Make a cable entry hole on the wall to recess the cables. Otherwise, cables can be threaded through the cable entry hole on the tube.
(2) Fix the suspension bracket on the wall
(3) Thread the cables through the gooseneck tube and the Indoor Mount kit and connect them to the dome camera.
(4) Fix the Indoor Mount kit to the goosenect tube using the equipped screqs and washers.
(5) Attach the speed dome camera to the Indoor Mount kit and fix them with the screw.

Wall Mounting: Gooseneck Tube + Indoor Mount Kit



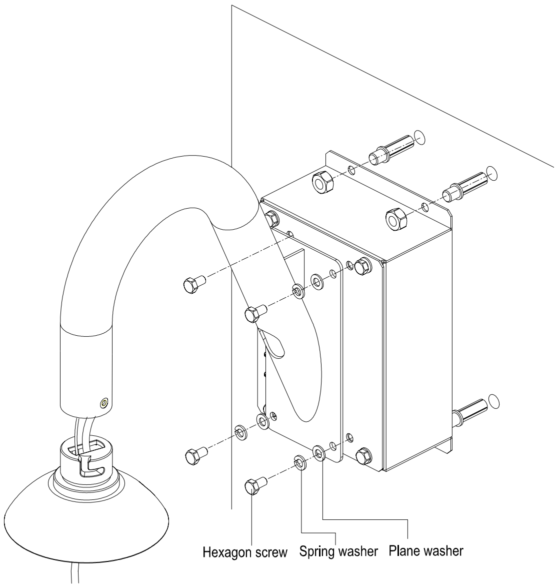
A-7-2 Wall Box Mounting

Follow the steps to mount the dome with the wall box and gooseneck tube.

1) Fix the wall box to wall.
2) Fasten the gooseneck tube on the wall box.
3) Thread the cables through the gooseneck tube and the Indoor Mount Kit and connect them to the dome camera.

For installation of the cables, Indoor Mount kit and the dome camera unit, refer to **A-7-1** as the steps are the same as for gooseneck mounting.

Wall Box Mounting: Wall Box + Gooseneck + Indoor Mount Kit



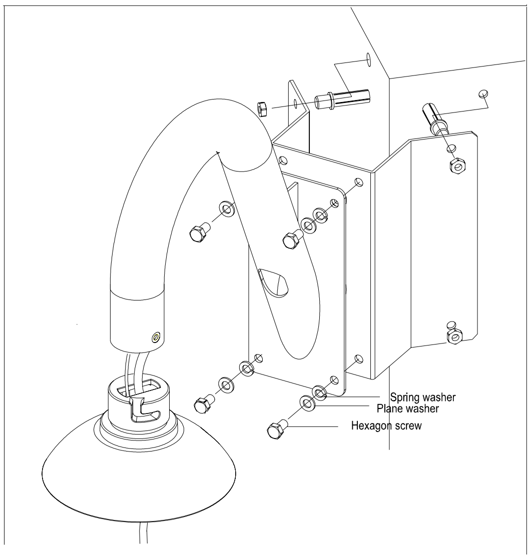
A-8: Corner Mount

A-8-1 Corner Standard Mounting Plate

With the corner mounting plate and gooseneck, the dome can be mounted on wall. There are various types of corner mounting accessories with different width.

1) Make a cable entry hole on the wall to recess the cables. Otherwise, cables can be threaded through the cable entry hole on the tube
2) Fix the suspension bracket on the wall
3) Attache the gooseneck tube to the firmly fixed bracket
4) For installation of the cables, Indoor Mount kit and the dome unit, refer to section **A-7-1** as the steps are the same as for gooseneck mounting.

Corner Wall Mounting: Corner Standard Mounting Plate + Gooseneck Tube + Indoor Mount Kit

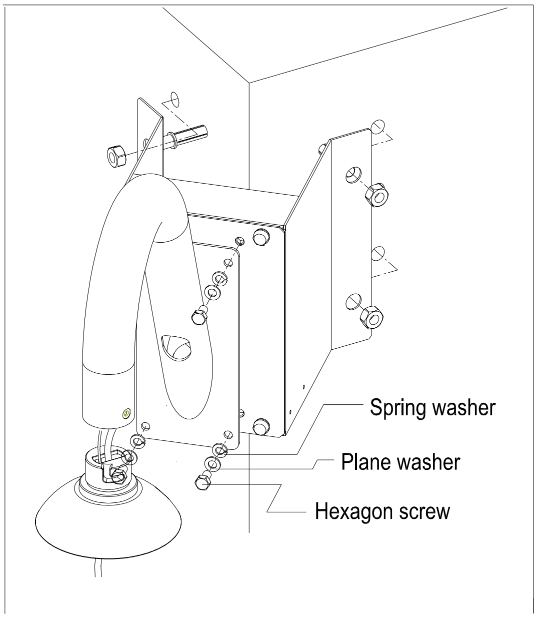


A-8-2 Corner Thin/Wide Box Mounting

The thin/wide corner box is designed to be installed with a gooseneck tube. Follow the steps to mount the dome camera with the corner box and gooseneck tube.

1) Make a cable entry hole on the wall to recess the cables. Otherwise, cables can be threaded through the cable entry hole on the tube
2) Fix the suspension bracket on the wall
3) Attache the gooseneck tube to the firmly fixed bracket
4) For installation of the cables, Indoor Mount kit and the dome unit, refer to section **A-7-1** as the steps are the same as for gooseneck mounting.

Corner Box Mounting: Corner Thin/Wide Box + Gooseneck Tube + Indoor Mount Kit



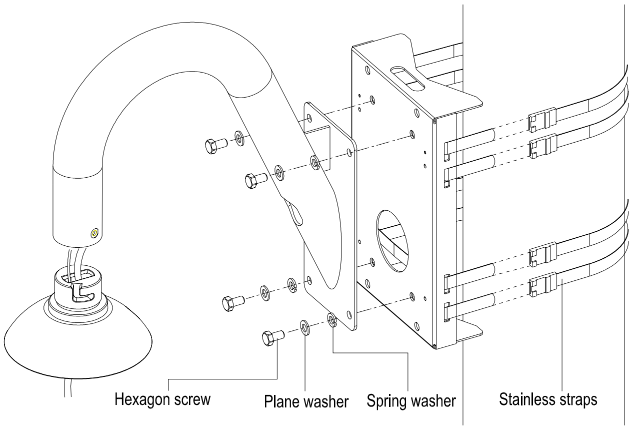
A-9: Pole Mount

A-9-1 Pole Thin/Wide Direct Mounting

The dome can be installed on a pole with a thin or wide pole mounting accessory and a gooseneck.

1) Fasten the suspension mounting plate on a pole with equipped stainless straps
2) Fix the gooseneck tube on the pole mounting plate
3) Thread the cables through the gooseneck tube and the Indoor Mount kit and connect them to the speed dome camera
4) Fix the Indoor Mount kit to the gooseneck tube using the screws and washers.

Pole Direct Mounting: Pole Thin/Wide Direct Mounting +Gooseneck Tube + Indoor Mount Kit

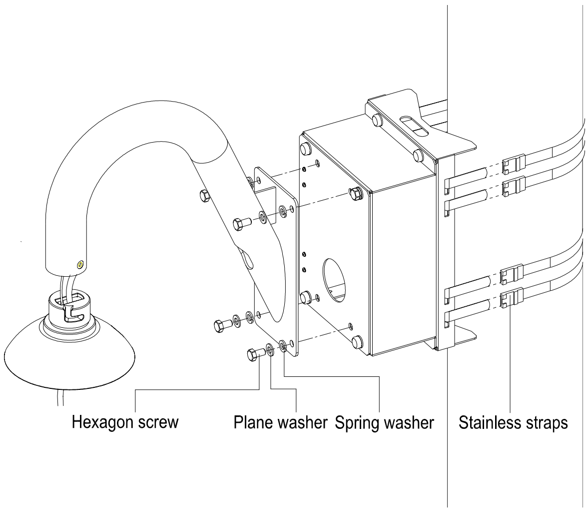


A-9-2 Pole Thin/Wide Box Mounting

Follow the steps to mount the PTZ camera with the pole box and gooseneck tube.

1) Fasten the pole box on a pole with equipped stainless straps
2) Fix the gooseneck tube to the pole box
3) Thread the cables through the gooseneck tube and the top holder and connect them to the PTZ camera
4) Fix the top holder to the gooseneck tube using the screws and washers.
5) Attache the PTZ camera to the top holder and fix them with the screw.

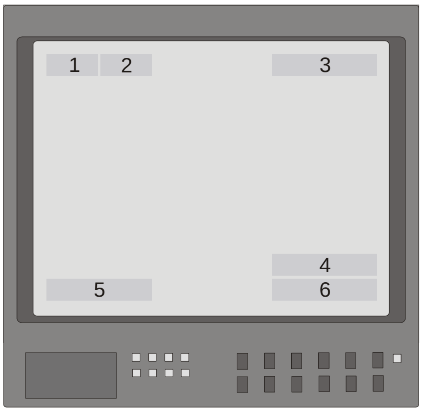
Pole Box Mounting: Pole Thin/Wide Box + Gooseneck Tube + Indoor Mount Kit



Appendix B: OSD Menu Notes

B-1: OSD Display Format

The information shown on the screen are described in terms of OSD display, position and function description in the table below.



Position	Function	OSD Display	Description
1	Focus Modes	A	Auto Focus Mode
		M	Manual Focus Mode
2	Backlight	X	Back Light Compensation OFF
		B	Back Light Compensation ON
3	Alarm	ALARM	Alarm Message
4	Zoom Ratio	×1	Present Zoom Ratio (Optical Zoom(Digital Zoom)
5	Title	• Maximum 20 characters for each title. • 16 sets of title are available.	
6	Camera ID	Show the camera ID	

B-2: OSD Setup Menu

The OSD setup menu structure of 18x model is listed separately in the following section. The star symbol indicates the factory default.

For detailed function description, please see section **B-3 Configuration Menu**

- **18x MODEL**

Item	Layer 1	Layer 2	Layer 3	Default
DEFAULT	<ON>, <OFF>			ON

Item	Layer 1	Layer 2	Layer 3	Default
CAMERA				
BACKLIGHT	<ON>, <OFF>			OFF
FOCUS	AUTO	AF Mode <Normal>, <Interval>, <Zoom Trigger>		Normal
	MANUAL	Focus Manual Speed <01>~<08>		
AE MODE	AUTO	Exposure Comp. <OFF>, <1>~<15>		OFF
	BRIGHT	Bright <0> ~ <31>		
	SHUTTER	Shutter Speed <1> ~ <1/10000> Sec.		
	GAIN	Gain <-3> ~ <28>dB		
	IRIS	Iris <Close>, <F1.6> ~ <F28>		
WBC MODE	AUTO (Auto White Balance)			
	INDOOR			
	OUTDOOR			
	ATW (Auto-tracing WBC)			
	MANUAL	R Gain <000> ~ <128>		
		B Gain <000> ~ <128>		
ID DISPLAY	<ON>, <OFF>			ON
SETUP MENU 1	FLIP	<IMAGE>, <M.E.>, <OFF>		OFF
	ZOOM SPEED	<1> ~ <8>		8
	SPEED BY ZOOM	<ON>, <OFF>		OFF
	AUTO CALI.	<ON>, <OFF>		OFF
	DIGITAL ZOOM	<ON>, <OFF>		ON
	SLOW SHUTTER	<ON>, <OFF>		OFF
	ANGLE ADJUSTER	ADJUST MIN ANGLE		00
		ADJUST MAX ANGLE		90
		RESET		
	RESET	<YES>		
	EXIT			
SETUP MENU 2	APERTURE	<01> ~ <16>		01
	MASK DISPLAY	<FIRST>, <LAST>		First
TITLE DISPLAY	<ON>, <OFF>			OFF
TITLE SETTING	<01> ~ <16>			01
ALARM	ALARM PIN	<1> ~ <8>		1

Item	Layer 1	Layer 2	Layer 3	Default
SETTNG	ALARM SWITCH	<ON>, <OFF>		OFF
	ALARM TYPE	<N.O.> (Normal Open), <N.C.> (Normal Close)		N.C.
	ALARM ACTION	PRESET		
		SEQUENCE		
		AUTOPAN		
		CRUISE		
	PRESET POINT	<001> ~ <256>		001
	SEQUENCE LINE	<1> ~ <8>		
	AUTOPAN LINE	<1> ~ <4>		
	CRUISE LINE	<1>		
	DWELL TIME	<001> ~ <127> Sec., <ALWAYS>		ALWAYS
	EXIT	YES		
HOME SETTING	HOME FUNC.	<ON>, <OFF>		OFF
	SELECT MODE	PRESET		
		SEQUENCE		
		AUTOPAN		
		CRUISE		
	PRESET POINT	<001> ~ <256>		001
	SEQUENCE LINE	<1> ~ <8>		
	AUTOPAN LINE	<1> ~ <4>		
	CRUISE LINE	<1>		
	RETURN TIME	<001> ~ <128> Min.		001
	GO	ENTER		
	EXIT			
SEQUENCE	SEQUENCE LINE	<1> ~ <8>		1
	SEQUENCE POINT	<01> ~ <32>		01
	PRESET POS.	<001> ~ <256>		001
	SPEED	<01> ~ <15>		01
	DWELL TIME	<000> ~ <127> Sec.		000
	RUN SEQUNECE			
	EXIT			
AUTOPAN	AUTOPAN LINE	<1> ~ <4>		1
	START POINT	<TO FIND>, <TO SAVE>		

Item	Layer 1	Layer 2	Layer 3	Default
	END POINT	<TO FIND>, <TO SAVE>		
	DIRECTION	<RIGHT>, <LEFT>		Right
	SPEED	<01> ~ <04>		01
	RUN AUTOPAN			
	EXIT			
CRUISE	RECORD START			
	RECORD END			
	RUN CRUISE			
	EXIT			
IR FUNCTION (F/U model only)	<AUTO>, <ON>			Auto
ALARM DETECT	DETECT SWITCH	<ON>, <OFF>		OFF
	DETECT MODE	<INT. FOCUS>, <FIX FOCUS>, <INT. AE>, <FIX AE>		Int. Focus
	EXIT			
PRIVACY	PRIVACY SWITCH	<ON>, <OFF>		OFF
	TRANSPARENCY	<ON>, <OFF>		OFF
	COLOR	<BLACK>, <HEAVY GRAY>, <LIGHT GRAY>, <WHITE>, <RED>, <GREEN>, <BLUE>, <CYAN>, <YELLOW>, <MAGENTA>		Black
	SET MASK	<01> ~ <24>	H CENTER <L>, <R>	
			V CENTER <D>, <U>	
			H SIZE <00> ~ <80>	
			V SIZE <00> ~ <60>	
	EXIT	YES		
TIME	TIME DISPLAY	<ON>, <OFF>		OFF
	SET YEAR			
	SET MONTH			
	SET DAY			
	SET HOUR			
	SET MINUTE			
	EXIT+SAVE			

Item	Layer 1	Layer 2	Layer 3	Default
EXIT OSD	YES			

B-3: Configuration Menu

The detailed functions and parameter settings of your high speed dome can be set by the OSD (On Screen Display) menu with a control program. The functions in OSD menu are described in the following sections.

18x MODEL

MAIN PAGE 1	
DEFAULT CAMERA	OFF
BACKLIGHT	OFF
FOCUS	AUTO
AE MODE	AUTO
WBC MODE	AUTO
ID DISPLAY	ON
SETUP MENU1	
SETUP MENU2	

B-3-1 DEFAULT CAMERA

The “DEFAULT CAMERA” is used to restore the camera settings (e.g. Backlight/Focus/AE//WBC/Aperture). Once any one of the items is modified, the setting will become <OFF> automatically. Select <ON> for this item to recall the mentioned camera parameters.

> **NOTE:** On **18x MODEL**, the Aperture function is provided in “SETUP MENU2”, instead of “DEFAULT CAMERA”.

B-3-2 BACKLIGHT

The Backlight compensation function prevents the center object from being too dark in surroundings where excessive light is behind the center object.

- **18x MODEL**

Turn this item <ON>; the center object will be brightened in contrast to the edge of the picture (where a backlight would most likely be located).

B-3-3 FOCUS

Automatically adjusts the focus position to maximize the high frequency content of the picture in a center measurement area, taking into consideration the high luminance and strong contrast components. The focus of the dome camera can be operated in two modes: Manual Focus mode and Auto Focus mode. Different settings for various models are described as follows.

- **18x MODEL**

- **AUTO**

  The optimum focus is achieved by the internal digital circuit. There are 3 modes for users to select for different conditions.

  Normal AF (Auto Focus) Mode: The dome will automatically adjust the focus of the picture.
  Zoom Trigger Mode: When the zoom ratio is changed, the dome will automatically adjust focus again after a period of time (the preset value is initially set for five seconds).
  Interval AF Mode: The mode is used for AF movements carried out at particular intervals. If users pan/tilt the dome, the dome will focus automatically after a period of time. The initial value is five seconds.

- **MANUAL**

  In this focus mode, users can adjust the lens focus manually.

FOCUS LENGTH	
TURNING VALUE	10CM
EXIT	YES

B-3-4 APERTURE

Sharpness is the subjective evaluation of detail in the picture. With this "APEATURE" function, users can adjust the enhancement of the edges of objects in the picture. When shooting text, this function may help by making them sharper and achieve a better image. There are 32 levels of adjustment, the options are <00> ~ <31>, <00> represents "no enhancement".

♦ **AUTO**

The dome camera will assign a proper aperture value automatically for camera to achieve a better image.

♦ **MANUAL**

Select this item if you want to adjust aperture value manually. Higher value enhances the incident ray of camera.

APERTURE MENU	
H APERTURE	15
V APERTURE	15

NOTE: For **18x MODEL**, please refer to section B-1-9 SETUP MENU2 for information on Aperture function.

B-3-5 AE MODE

The exposure is the amount of light received by the image sensor and is determined by how wide you open the lens diaphragm (iris adjustment), by how long you keep the sensor exposed (shutter speed), and other exposure parameters. With this item, users can define how the Auto Exposure (AE) function works.

➢ **18x MODEL**

♦ **AUTO**

In this mode, the camera's IRIS and AGC (Auto Gain Control) control circuits work together automatically to adjust the light exposure of image sensor in order to get consistent video output level. At this condition the shutter speed is fixed at 1/60 (NTSC) or 1/50(PAL). Users can offset the internal brightness reference level through auto Exposure Comp. to control the brightness of camera. The value of Exposure Comp. is selectable from <0> to <16> and the gain varies from -10.5 dB to 10.5 dB. Each step is 1.5 dB; the Exposure Comp. vaue <7> is equal to gain value 0 dB. The camera will not compensate brightness when the Exposure Comp. is set to <OFF>. The default setting is <OFF>.

♦ **BRIGHT**

The brightness control function adjusts IRIS and AGC gain using an internal algorithm. The brightness is controlled by gain when the light condition is dark and by iris when the light condition is bright.

- **SHUTTER**

  With this option, the SHUTTER speed takes main control of the exposure, and both IRIS and AGC will function automatically in cooperation with shutter speed to achieve consistent exposure output.

- **GAIN**

  The auto GAIN control function takes main control of exposure with priority over SHUTTER and IRIS. The internal circuit will function automatically to get consistent exposure.

- **IRIS**

  With this option, the IRIS function adjust the exposure in higher property. SHUTTER speed and AGC circuit will function automatically in cooperating with IRIS to get consistent exposure output. The opening of a lens controls the amount of light reaching the surface of the selected device. By increasing the F-stop number (F/1.6, F/2, F/2.4, etc.), less light is permitted to pass.

B-3-6 WBC MODE

A digital camera needs to find reference colour temperature, which is a way of measuring the quality of a light source, for calculating all the other colours. The unit for measuring this ratio is in degree Kelvin (K). You can select one of the White Balance Control modes according to the condition. The following table shows the colour temperature of some light sources.

Light Sources	Color Temperature in K
Cloudy Sky	6,000 to 8,000
Noon Sun and Clear Sky	6,500
Household Lighting	2,500 to 3,000
75-watt Bulb	2,820
Candle Flame	1,200 to 1,500

➢ **18x MODEL**

♦ **AUTO**

In this mode, white balance works within its colour temperature range. This mode computes the white balance value output using colour information from the entire screen. It outputs the proper value using the colour temperature radiating from a black subject based on a range of values from 3000K to 7500K.

♦ **INDOOR**

3200K Base mode

♦ **OUTDOOR**

5800K Base mode

♦ **ATW**

Auto Tracing White Balance mode. The dome taking out the signals in a screen in the range from 2000K to 10000K.

♦ **MANUAL**

In this mode, users can change the White Balance value manually; R gain and B gain are adjustable and range from 0 to 128.

WBC MENU	
R GAIN	50
B GAIN	50

B-3-7 ID DISPLAY

Users are allowed to choose whether the dome ID will be displayed on monitor to identify the domes.

♦ **ON**

Display the ID address of the selected dome on the right bottom of the monitor screen.

♦ **OFF**

Hide the ID address of the selected dome.

B-3-8 SETUP MENU

Users can adjust camera lens model parameters under SETUP MENUs. Depending on the model of dome cameras, the SETUP MENUs are different.

18x MODEL

SETUP MENU1	
FLIP	ENTER
ZOOM SPEED	1
SPEED BY ZOOM	OFF
AUTO CALI.	OFF
DIGITAL ZOOM	12
SLOW SHUTTER	OFF
ANGLE ADJUSTER	ENTER
RESET	YES
EXIT	YES

SETUP MENU2	
APERTURE	01
MASK DISPLAY	FIRST

- **FLIP (IMAGE/ME/OFF)**

  User can track an object continuously when it passes through under dome camera with setting Flip to IMAGE (digital flip) or M.E. (mechanical flip).

FLIP SETTING	
FLIP	OFF
EXIT	YES

IMAGE

IMAGE represents digital IMAGE FLIP, enables users to keep tracking object seamlessly and no delay occurs in comparing with mechanical flip.

> **NOTE:** The Privacy Mask function will be automatically disabled if the Image Flip function is enabled, and "Masking will be disabled" will be displayed on the screen.

M.E.

The item is a standard mechanical operation. As the dome tilts 90°, it will pan 180°, then continuing tilt to keep tracking object.

OFF

Select this item to disable the flip function.

> **NOTE:** The speed dome will only be able to tilt 90°, or -10° ~ 100° with angle adjuster adjustments.

♦ **ZOOM SPEED**

This item is used to set the zoom speed for operating the dome camera.

➢ **18x MODEL**

For this model, the zoom speed options are <1> (slow) ~ <8> (fast). The default is <8>

♦ **SPEED BY ZOOM**

If the item is set to <ON>, the pan/tilt speed will be adjusted by internal algorithm when zooming automatically. The larger zoom ratio leads the lower rotation speed.

♦ **AUTO CALIBRATION**

There are one horizontal and one vertical infrared rays check points in each dome. When the dome camera position may be moved during installation or maintenance, the relative distance between the original set point and the check point has been changed. Enable the Auto Calibration function, the dome will automatically detect that and reset the point baack to the original position.

♦ **DIGITAL ZOOM**

With this item, users can enable or disable the 12x Digital Zoom. The Digital Zoom activate after the full Optical Zoom level is reached.

> **NOTE:** The difference between optical and digital zoom is that optical zoom uses the lens within the camera to draw the image closer via zoom in or out to achieve the desired effect. Optical zoom remains the same and the full resolution of the zoomed image quality. On the other hand, Digital zoom takes a portion of image and expands that image to the full size of the image; however the image quality will be reduced.

➢ **18x MODEL**

For this model, maximum 12x digital zoom function is allowed to be enabled.

The default setting is <ON>

- **SLOW SHUTTER**

  The shutter speed determines how long the image sensor is exposed to light. To see clear image in a dark environment, enable this function and select a slower shutter speed.

- **18x MODEL**

  As enable this digital slow shutter function, the dome will automatically adjust the shutter speed basing on the light condition of installation environment. It enables users to see objects in a dark environment under 0.2 lux.

- **ANGLE ADJUSTER**

  The item is for adjusting the camera view angle. The ranges of view angle are changed in different FLIP mode: the angle ranges from -10° to +100° with ME FLIP and FLIP OFF modes, and from -10° ~ +190° with IMAGE FLIP mode. With IMAGE FLIP function, users are able to adjust the view angle from -10° ~ +190° to catch the true horizontal line.

ANGLE ADJUSTER	
ADJUST MIN ANGLE	-10 DEG
ADJUST MAX ANGLE	100 DEG
EXIT+SET	YES

- **RESET**

  Select this item to reset all the camera parameters of SETUP MENUs to the factory dfault.

- **EXIT**

  Exit the SETUP MENU1 and go back to MAN MENU.

B-3-9 SETUP MENU2

The Aperture and Mask Display settings can be configured under SETUP MENU2.

```
            SETUP MENU2
APERTURE                        01
MASK DISPLAY                    FIRST
```

♦ **APERTURE**

Under this setup menu, users can adjust the enhancement of the edges of objects in the picture. There are 16 levels of adjustment; the options are <01> ~ <16>, <01> represents “no enhancement”. When shooting text, this function may help by making them sharper.

♦ **MASK DISPLAY**

In this item, users can set the occasion to display the Privacy Mask, which aims to avoid any intrusive monitoring. If preset point function or sequence function is activated, the difference of the two display mode will be obvious.

FIRST

If select this display mode and activate preset or sequence functions, the camera will detect and display the masks set in the next area first, then rotates the dome to the next preset point.

LAST

If select this display mode and activate preset or sequence functions, the dome will move the next preset point zone, then detect and display mask set in that zone.

> **NOTE:** Setting privacy mask with 1x optical zoom, and setting the sequence speed value higher than 10 is recommended.

B-3-10 TITLE DISPLAY

User are allowed to name a certain view area and display its title for easy recognition. At this item, users can choose to display or not to display the titles set in advance.

♦ **ON**

A title set for certain view will be displayed when the dome back to the view area.

♦ **OFF**

When the TITLE DISPLAY is set <OFF>, no title will be displayed on the screen even titles are set in advance.

B-3-11 TITLE SETTING

Up to 16 zone titles can be set with maximum 20 characters for each title; two mask zones are allowed to set in a view area. Users can name the zone titles with privacy mask ID numbers for future recognition.

Follow the steps to set a camera title.

(1) Operate speed dome to certain view area where you want to set a title for it.

(2) Turn on OSD and select <TITLE SETTING>.

(3) Select a number to indicate the view area.

(4) Press <ENTER> to go into editing mode.

```
                 TITLE SETTING: 01

0  1  2  3  4  5  6  7  8  9          EXIT
A  B  C  D  E  F  G  H  I  J          SAVE
K  L  M  N  O  P  Q  R  S  T          LEFT
U  V  W  X  Y  Z  :  /  .  ,         RIGHT
[  ]  +  ?  -                       DELETE

TITLE:
ABC
```

(5) Choose a character with direction keys and then press <ENTER> to input.
Example: <A> <ENTER>, <B> <ENTER>, <C> <ENTER>
TITLE: ABC

(6) To delete entered characters, move the cursor to <LEFT> or <RIGHT> and press <ENTER> to select a character in entry field, then move the cursor to <DELETE> and press <ENTER> to delete the selected character.

(7) When the setting is completed, move the cursor to <SAVE> and press <ENTER> to save.

B-3-12 ALARM SETTING

The integrated high speed dome provides eight alarm inputs and two alarm outputs (N.O. and N.C.) to connect alarm devices. With this function, dome will cooperates with alarm system to catch the event images. For wiring, please refer to the installation guide and/or qualified service personnel. Alarm parameters can

be set on this page.

```
          ALARM SETTING
ALARM PIN                 1
ALARM SWITCH              OFF
ALARM TYPE                N.C.
ALARM ACTION
     PRESET
PRESET POINT              001
DWELL TIME                ALWAY
```

- **ALARM PIN**

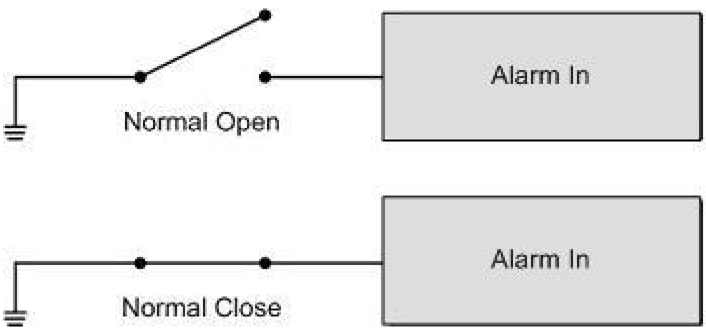
  The dome provides 8 alarm inputs and 2 outputs (1 x N.O. and 1 x N.C.). Select an alarm connector which you want to set its alarm-related parameters with this item, and then set its alarm-related parameters in Alarm Setting menu.

- **ALARM SWITCH**

  The item is used to enable or disable the selected alarm pin function.

- **ALARM TYPE**

  There are two kinds of alarm types: Normal Open and Normal Close, which are illustrated as below. Select an alarm type that corresponds with the alarm application.



- **ALARM ACTION**

  Select one of these modes that choose a kind of actions that should be executed when an alarm is triggered. The alarm actions can be set to execute the preset position, sequence, auto-pan or cruise function.

- **PRESET**

Select a preset point where the dome should go when an alarm pin is triggered.

SEQUENCE

Select a sequence line that the speed dome camer should execute when alarm pin is triggered. The Sequence line should be defined prior in SEQENCE setup menu.

AUTOPAN

Select an auto-pan line that the dome camera should execute when alarm pin is triggered. The Auto-pan line can be defined in setup AUTOPAN menu.

CRUISE

Select a cruise line that the speed dome camera should execute when alarm pin is triggered. The Cruise line can be defined in CRUISE setup menu.

- **DWELL TIME**

  The DWELL TIME is the duration of executing ALARM ACTION: Preset or Sequence. When alarm takes place, the dome will go to the preset position or execute sequence function and stay at each sequence point for a period of time (1~127 seconds). If select <Always>, the dome will go to the preset position and stay there until alarm condition is released or users rotate the dome.

> **NOTE:** The DWELL TIME is only accessible when selecting ALARM ACTION: Preset or Sequence.

- **EXIT**

  Exit the ALARM SETTING menu.

B-3-13 HOME SETTING

Users are able to set an operation mode to ensure constant monitoring; if the dome idles for a period of time, the pre-set function will be activated automatically, this is the HOME function. HOME function allows constant and accurate monitoring, to avoid the speed dome stops or missing events.

HOME SETTING	
HOME FUNCTION	OFF
SELECT MODE	PRESET
PRESET POINT	001
RETURN TIME	001
GO	ENTER
EXIT	YES

- **HOME FUNCTION**

  The item is used to enable or disable the HOME function.

- **SELECT MODE**

  Select one of the modes that the dome should execute when HOME function is enabled and the RETURN TIME is up. The options are <AUTOPAN>, <SEQUENCE>, <CRUISE> and <PRESET>.

- **PRESET**

  Select a preset point where the speed dome should go when alarm pin is triggered.

  SEQUENCE

  Select a sequence line that the speed dome camer should execute when alarm pin is triggered. The Sequence line should be defined prior in SEQENCE setup menu.

  AUTOPAN

  Select an auto-pan line that the speed dome camera should execute when alarm pin is triggered. The Auto-pan line can be defined in setup AUTOPAN setup menu.

  CRUISE

  Select a cruise line that the speed dome camera should execute when alarm pin is triggered. The Cruise line can be defined in CRUISE setup menu.

- **RETURN TIME**

  The speed dome starts to count down RETURN TIME when the dome idles, and will execute the SELECT MODE function if the return time is up. The RETURN TIME ranges from 1 to 128 minutes.

- **GO**

  If HOME function is enabled, the users are allowed to execute HOME function manually by selecting this item.

- **EXIT**

  Exit the HOME SETTING menu.

B-3-14 SEQENCE

The function executes pre-positioning of the pan, tilt, zoom and focus features in a certain sequence for a camera. Before set up this function, users must setup at least two preset points.

```
              SEQUENCE
SEQUENCE LINE             1
SEQUENCE POINT            01
PRESET POSITION           001
SPEED                     1
DWELL TIME                001
RUN SEQUENCE              ENTER
EXIT                      YES
```

- **SEQUENCE LINE**
  There are eight sets of sequence lines built in the speed dome camera. Using LEFT/RIGHT direction keys to select a line first and then set its sequence points.

- **SEQUENCE POINT**
  Up to 32 points can be specified for each sequence line. The sequence points represent the orders of the preset points that the dome will automatically run, and the bellowing setup items, PRESET POSITION, SPEED, and DWELL TIME, are related to this item.

- **PRESET POSITION**
  Users can assign a specific preset position to the selected sequence point with this item.

- **SPEED**
  Users can set the Speed that the dome goes to the next sequence point, and setup speed range is from 1 ~ 15. Refer to below table for more information.

	PAN (degree/sec.)	**TILT** (degree/sec.)
Speed 1	10	8
Speed 2	23	12
Speed 3	35	22
Speed 4	45	30
Speed 5	55	40

Speed 6	65	50
Speed 7	75	58
Speed 8	185	185
Speed 9	205	210
Speed 10	225	240
Speed 11	250	275
Speed 12	280	305
Speed 13	320	335
Speed 14	365	365
Speed 15	400	400

♦ **DWELL TIME**

The DWELL TIME is the duration time that the speed dome will stay at the sequence point, and the range is from <0> to <127> seconds. The speed dome will go to the next sequence point when the DWELL TIME is up. If the setting is <0>, the speed dome will stay at this sequence point until users manually move the speed dome.

♦ **RUN SEQUENCE**

User can command the speed dome camera to run the selected Sequence line manually.

♦ **EXIT**

Select the item to exit the SEQUENCE menu.

B-3-15 AUTOPAN

Auto-pan means rotating or scanning side-to-side motion by a speed dome camera to view an area horizontally. The parameters can be set on this page.

```
              AUTOPAN
AUTOPAN LINE            1
START POINT             TO FIND
END POINT               TO FIND
DIRECTION               RIGHT
SPEED                   1
RUN AUTOPAN             ENTER
EXIT                    YES
```

♦ **AUTOPAN LINE**

There are four sets of auto-pan lines built in speed dome camera. Users are able to command the speed dome camera to do continuously panning without limit by setting the start point the same as endpoint.

- **START POINT**

Follow the description to set the start position of the AUTOPAN path.

1. Move the cursor to <START POINT> and press <ENTER> while <TO FIND> item flashes, the item will turn <TO SAVE> automatically.
2. Move the speed dome to a desired position and press <ENTER> to save the position as the start point; the cursor will move to <END POINT> automatically. Ensure to set the end point to complete the auto-pan setting.

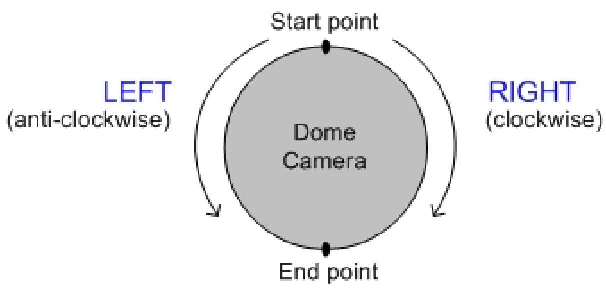
> **NOTE:** The tilt and zoom value of the start point will be recorded and fixed for the selected auto-pan line.

- **END POINT**

Users are able to set the end point after the start point is defined. Pan the dome to another position and press <ENTER> to save the position as the end point.

- **DIRECTION**

The item is for setting the AUTOPAN direction of speed dome camera. The speed will start to pan clockwise from the start point to the end point if your selection is <RIGHT>, and then return to the start point. The speed dome will start to pan anti-clockwise from the start point to the end point if your selection is <LEFT>. Refer to below diagram.



- **SPEED**

The item is for defining the speed dome camera rotation speed while running

auto-pan. The speed is adjustable from 1 to 4; refer to the table below for details.

	PAN (degree/sec.)
Speed 1	10
Speed 2	23
Speed 3	35
Speed 4	45

♦ **RUN AUTOPAN**

After the setting is completed, select this item to manually execute the Auto-pan function.

♦ **EXIT**

Exit the AUTOPAN setup menu.

B-3-16 CRUISE

A Cruise is a route of manual operations that can be stored and recalled to execute repeatedly. It can be formed of pan, tilt position and zoom parameters

```
          CRUISE
RECORD START          ENTER
RECORD END            ENTER
RUN CRUISE            ENTER
EXIT                  YES
```

♦ **RECORD START**

Follow the description to record the CRUISE path.

1. Rotate the speed dome camera to a desired view area. The percentage of the memory buffer will be displayed on the screen.
2. Pan, tilt the dome camera to form a path. The zoom setting is only available with **18x MODEL**.

> **NOTE:** Beware of the memory size when building the cruise path. After the percentage of the buffer becomes 100%, the path will not be recorded.

- **RECORD END**
  The cursor will be moved RECORD END while building the cruise line; when the setting is completed, press <ENTER> to save the path.

- **RUN CRUISE**
  After the setting is completed, select this item to manually execute the Cruise function.

- **EXIT**
  Exit the CRUISE setup menu.

B-3-17 IR FUNCTION (Removable IR Cut)

With the IR cut filter, the speed dome can still catch clear image at night time or very dark light condition. During day time, the IR cut filter will be on to block the infrared light for clear image; during night time, the IR cut filter will be removed to catch infrared light to view images in black and white.

Refer to the description to operate the removable IR cut filter.

- **18x MODEL**
- **AUTO**
  The internal circuit will automatically decide the occasion to remove the IR cut filter according to the value of light condition calculated by the internal light algorithm.
- **ON**
  Select the item to remove the IR cut filter.

B-3-18 ALARM DETECT

This function instructs the camera to detect movement within the monitoring area and then send an alarm signal automatically. To activate this function, alarm connection setups most be completed in advance.

```
            ALARM DETECT
DETECT SWITCH          OFF
DETECT MODE            INT. FOCUS
EXIT                   YES
```

- **DETECT SWITCH**

  The item is used to enable or disable the ALARM DETECTION function.
- **DETECT MODE**

  Four alarm detect modes are provided for different application.

  INT. FOCUS

  The alarm will be triggered if the internal focus changes; and if the focus returns to the original position, the alarm will stop.

  FIX FOCUS

  If focus movement is detected, the alarm will be triggered, and the alarm stops when focus returns to the original position. Of the detected focus movement keeps changing for more than four seconds, the new focus position will be memorized as the reference and the alarm will stop.

  > **NOTE:** The INT. FOCUS and FIX FOCUS detect modes will be activated only with Auto Focus mode.

  INT. AE

  When Auto Exposure (AE) movement is detected, the alarm will be triggered; and if the Exposure Level returns to the original level, the alarm will stop.

  FIX. AE

  The alarm will be triggered if the Exposure value changes; if the adjusted AE value retains for four seconds, the value will be saved as the reference and the alarm will stops.

- **EXIT**

  Exit this page.

B-3-19 PRIVACY

The Privacy Mask function aims to avoid any intrusive monitoring. Users can adjust the camera view position, and adjust the mask size and area. The speed

dome camera will memorize the center of the selected view as an original point, so it will be locked as users enter the Privacy Setup menu. Refer to the description for setting Privacy masks.

> **NOTE:** The Image Flip function will be disabled automatically while the Privacy function is enabled.

- **18x MODEL**

PRIVACY MASK MENU	
PRIVACY SWITCH	ON
TRANSPARENCY	OFF
COLOR	BLACK
SET MASK	01
EXIT	YES

- **PRIVACY SWITCH**

  User can enable or disable the Privacy Mask function through this item.

- **TRANSPARENCY**

  The colour of privacy mask can be set as transparent related to background image. Select <ON> to display transparent masks.

- **COLOUR**

  The colour of privacy mask can be set through this item. The available colours are black, heavy gray, light gray, white, red, green, blue, cyan, yellow and magenta.

- **SET MASK**

  Use the control device to move the speed dome camera to the area whether you want to set a mask. Press <ENTER> to enter MASK SETUP MENU. The speed dome will memorize this position as privacy mask position. Up to 24 masks can be set.

MASK01 MENU	
H CENTER	L/R
V CENTER	U/D
H SIZE	000
V SIZE	000
EXIT+SAVE	YES

H CENTER

The original horizontal center of mask zone is the center of screen; it is able to move to other position by adjusting the horizontal value.

V CENTER

The original vertical center of mask zone is the center of screen; it is able to move to other position by adjusting the vertical value.

H SIZE (00 ~ 80)

User can adjust the horizontal size of privacy mask through this item. Set the H and V size to 0 can also delete the selected mask.

V SIZE (00 ~ 60)

User can adjust the vertical size of privacy mask through this item. Set the H and V size to 0 can also delete the selected mask.

- ♦ **EXIT**

  Exit this page.

B-3-20 TIME FUNCTION

The item is used to set the TIME related parameters of the integrated high speed dome.

TIME SETTING	
TIME DISPLAY	OFF
SET YEAR	05
SET MONTH	10
SET DAY	02
SET HOUR	12
SET MINUTE	12
EXIT+SAVE	YES

- ♦ **TIME DISPLAY**

  Select <ON> to display the Time information on screen, or <NO> not to display.

- **YEAR / MONTH / DAY**
  The items are for setting up the system date.

- **HOUR / MINUTE**
  This items are for setting up the system time.

- **EXIT+SAVE**
  Exit this page.

B-3-21 EXIT OSD

To exit the OSD setup menu, users can select this item.